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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/915,966

07/26/2001

Joseph Donald Runzo

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24628 7590 10/22/2007  
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EXAMINER

NGUYEN BA, HOANG VU A

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

10/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/915,966

Applicant(s)

RUNZO, JOSEPH DONALD

Examiner

Hoang-Vu A. Nguyen-Ba

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is responsive to the amendment filed August 10, 2007.
2. Claims 1-35 are pending. Claims 1, 22 and 24 are independent claims.

### ***Response to Amendments***

3. Per Applicant's request, Claims 1, 22 and 24 have been amended and Claim 35 has been added.
4. The objection to the Specification is withdrawn in view of Applicant's amendment to the Specification to correct some identified minor informalities.
5. The objection to the drawings is withdrawn as a result of Applicant-requested consideration by the examiner of the formal drawings filed on September 10, 2001.

### ***Response to Arguments***

6. Applicant's arguments in the Remarks, pp. 11-13, filed concurrently with the above-mentioned amendment have been fully considered but are deemed not persuasive. Following is an examiner's response to Applicant's arguments.

#### **Amended Claims 1 and 24**

#### **Applicant's arguments:**

With respect to the individual rejections in the Office Action, applicant notes that the device of the Bush et al. patent, shown in Figure 8, does not function in the manner suggested by the present invention as presently amended. Specifically, Bush et al. does not teach the use of alternate, independently tuned RF carrier frequencies within predetermined spectra to determine, on its own, identification of the incursion or leakage of cable television signal rather than falsely identifying wideband noise as a source of concern. Instead, Bush et al. teaches the taking of a first and second signal which are then modulated and compared. Applicant notes that Bush et al. does not teach the invention shown in any of the independent claims as now amended and therefore cannot teach the inventions of the claims dependent thereon.

#### **Examiner's response:**

the addition of “such that an off-tuned carrier frequency, within the same RF television channel allocation but at an alternate to the center carrier frequency location where side band energy should be reduced, is selected” to the limitation “off-tuning the receiver by a predetermined offset,” while further limiting the off-tuning step does not appear to distinguish the instant claims over Bush’s teaching of measuring the magnitude of received frequencies in the first frequency band, measuring the magnitude of received frequencies in the second frequency band and comparing the two measured magnitudes. The relationship (i.e., difference) of the two magnitudes is interpreted as the claimed “offset.” If one considers in FIG. 7 that 2 KHz is the first frequency (e.g., the claimed center frequency) and 1 KHz is the second frequency (e.g., the claimed offset center frequency), then one would find that 1KHz is within the same baseband video (e.g., the claimed “within the same RF television channel allocation) but offset from the first center frequency – 2 KHz -- (e.g., the claimed center frequency) where the energy at 1 KHz is smaller (e.g., the claimed “where the sideband energy is reduced”) than the energy at 2KHz.

In view of this interpretation, the amended claims still read on Bush and the rejection of Claims 1 and 24 under 35 U.S.C. § 102(e) as anticipated by Bush et al. is considered still proper.

Applicant’s arguments:

The Office Action has rejected claims 8, 11, 10-20, 22-23, 27 and 33-34 under 35 U.S.C. § 103 as being unpatentable over Bush et al in view of Ostteen et al. (U.S. Patent No. 5,294,937). Applicant disagrees with the Office Action’s reliance on Ostteen et al. to cover all of the limitations not covered by Bush et al. First, Bush et al, as noted above, does not teach the invention shown in the independent claims; second, the addition of Ostteen et al., which is a signal measurement device that uses signal strength and geographic location to determine leakage, does not provide the necessary teaching to overcome the deficits of Bush et al. with respect to the independent claims. In deed, the Office Action does not show the use of Ostteen et al. in its rejection of the independent claims. As such, the claims of the present invention are not made obvious by the combination of Bush et al. and Ostteen et al.

The combination of Bush et al, and Ostteen et al. could not produce the invention of the present application, even if there was some motivation to combining the references (which do similar tasks so as not to need combining). It would not, therefore, be obvious to a person having ordinary skill in the art, to combine these references to arrive at the device and method of the present invention.

Examiner's response:

In response to Applicant's first argument that Bush does not teach the invention shown in the independent claims, the examiner respectfully notes that the response to this argument has been addressed above.

In response to Applicant's second argument that Ostteen does not provide the necessary teaching to overcome the deficits of Bush, the examiner respectfully notes that Ostteen was not applied in the rejection of independent claims 1 and 24. Only independent claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bush in view of Ostteen because Bush does not teach the two saving steps claimed in Claim 22. See Office action.

For rejection of the dependent claims from independent claims 1, 22 and 24 respectively, see previous Office action and/or hereinafter.

***Claim Rejections – 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejection under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States and was published under Article 21(2) of such treaty in the English language

8. Claims 1-7, 9-10, 12-18, 21, 24-26, 28-32 and 35 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,804,826 to Bush et al. ("Bush").

**Claim 1 (Currently Amended)**

Bush discloses

*a) tuning a radio frequency receiver to a desired visual carrier center frequency of a selected RF channel (see at least 2:7-9, 46-51; 3:1-6, 33-36; 4:9-17);*

*b) measuring a signal level of the carrier frequency (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43);*

*c) off-tuning the receiver by a predetermined offset such that an off-tuned carrier frequency, within the same RF television channel allocation but at an alternate to the center carrier frequency location where side band energy should be reduced, is selected (see at least 3:46 – 4:5; 4:27-43; 8:47 – 9:11);*

*d) measuring a signal level of the off-tuned carrier frequency (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43);*

*e) obtaining a signal level difference between the signal level of the carrier frequency and the signal level of the off-tuned carrier frequency to determine if interference exists (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43);*

*f) declaring an interference condition if the signal level difference is less than a predetermined difference amount (see at least 1:52-53; 2:48-51; 3:50 – 4:43; 6:16-29; 8:47-60); and*

*g) providing an indication of the signal level of the carrier frequency to permit a determination of whether a signal leakage condition exists (see at least 1:51-53; 2:48-51; 3:50-55; 4:6-13; 26-43; 6:16-29).*

#### **Claim 24**

Claim 24 is an independent claim that recites a system for validating signals and detecting signal leakage in a cable communications system, the cable communications system providing channel programming on a plurality of Rf channels, the system comprising:

*a radio frequency receiver (see at least FIG. 8, device 304);*

*a computer operatively coupled to the receiver and to a display (see at least 8:15-37; e.g., the Trilithic, Inc. model SuperPlus™), the receiver configured to perform the method steps of Claim 1. Therefore, the rejection set forth in Claim 1 is deemed applicable to Claim 24.*

#### **Claim 2**

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps of measuring are performed by receiving signals corresponding to an existing RF carrier frequency, which signals egress from the cable communications system (see at least 1:50-53; 2:48-51; 6:16-29; 8:47 – 9:58).*

#### **Claim 3**

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps of measuring are performed passively with no encoding or injecting of test signals into the selected RF channel or modifying the channel programming of the selected channel* (see at least 6:16-29; 8:47 – 9:58).

#### **Claim 4**

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps (a) through (g) are continuously repeated* (see at least 6:16-29; it is noted the measurements need to be repeated continuously for each of the multitudes of circuits between subscribers in order to detect and locate the egress).

#### **Claims 5 and 25**

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the carrier frequency of the selected RF channel is between 108 MHz and 400 MHz* (see at least 9:30).

#### **Claim 6**

The rejection of base claim 1 is incorporated. Claim recites *wherein the carrier frequency is within a frequency spectrum designated for use by aircraft communication and aircraft navigation*. See rejection set forth in Claim 5.

#### **Claims 7 and 26**

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the receiver is off-tuned by between 5 kHz and 100 kHz from a center frequency of the carrier* (see at least 7:54 – 9:58).



### Claims 9 and 28

Rejections of base claim 1 and intervening claim 7 and of base claim 24, respectively are incorporated. Bush further discloses *wherein the receiver is off-tuned to a frequency above the center frequency of the carrier* (see at least 8:38-60).

### Claim 10

Rejections of base claim 1 and intervening claim 7 are incorporated. Bush further discloses *wherein the receiver is off-tuned to a frequency below the center frequency of the carrier* (see at least 8:38-60).

### Claims 12 and 29

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the predetermined difference amount is 3 dB* (see at least 8:53-60; it is noted that 3 dB is equivalent to a ratio of 2, e.g., an increase amount of 3 dB in energy at the reference energy 2 KHz is equal to twice of the amount of energy at the reference frequency, e.g., energy of 4 KHz).

### Claim 13

The rejection of base claim 1 is incorporated. Bush further discloses *validating the carrier frequency measurement if the signal level difference is not less than the predetermined difference amount* (see at least 8:47-60).

### Claims 14 and 30

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein if the interference condition has not been declared, declaring a signal*

*leakage condition if the signal level of the carrier frequency is greater than a predetermined leakage amount* (see at least 9:27-49).

### **Claims 15 and 31**

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein if the interference condition has not been declared, providing an indication of the signal level of the carrier frequency so that a signal leakage condition can be determined* (see at least 3:56 – 4:43).

### **Claims 16 and 32**

Rejections of base claim 1 and intervening claim 15 and of base claim 24, respectively, are incorporated. Bush does not specifically disclose *wherein the indication of the signal level of the carrier frequency is periodically updated*. However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update of the detected value at each point of the circuit (2:46-51).

### **Claim 17**

Rejections of base claim 1 and intervening claim 15 are incorporated. Bush does not specifically disclose *wherein the indication of the signal level of the carrier frequency is updated in real time*. However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update in real-time of the detected value at each point of the circuit (2:46-51).

### Claim 18

The rejection of base claim 1 is incorporated. Bush further discloses *providing an indication of the signal level of the carrier frequency so that a signal leakage condition can be determined* (see at least 3:56 – 4:43).

### Claim 21

The rejection of base claim 1 is incorporated. Bush does not specifically disclose *wherein if the interference condition is detected, an alternate RF channel is chosen having a predetermined RF frequency spacing from the selected channel, and steps (a) through (g) are repeated*. However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update of the detected value at each point of the circuit (2:46-51; 6:16-29; it is noted the measurements need to be repeated continuously for each of the multitudes of circuits between subscribers in order to detect and locate the egress).

### Claim 35 (New)

The rejection of base claim 24 is incorporated. Bush further discloses *wherein the receiver is off-tuned to a frequency above the center frequency of the carrier* (see at least 8:38-60).

### ***Claim Rejections – 35 USC § 103***

9. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8, 11, 19-20, 22-23, 27 and 33-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,804,826 to Bush et al. ("Bush") in view of U.S. Patent No. 5,294,937 to Ostteen et al. ("Ostteen").

### **Claims 8 and 27**

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein the receiver is off-tuned by between 100 kHz and 1 MHz from a center frequency of the carrier*. However, Ostteen discloses that the RF meter may be configured to measure signals in a broad spectrum of bandwidths (see at least 5:24-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bush with Ostteen, as this would provide Bush with more versatility in the measurement of signal leakage.

### **Claim 11**

The rejection of base claim 1 is incorporated. Bush does not specifically disclose *wherein at least one of the measured signal level of the carrier frequency and the measured signal level of the off-tuned carrier frequency are saved to facilitate obtaining the signal level difference*. However, Ostteen discloses that the data in RAM are saved every two minutes for the purpose of providing data backup to the computer system such that if power is lost, no more than two minutes of data will be lost (see at least 7:33-60). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature in Bush for the same purpose.

### **Claims 19 and 33**

The rejection of base claims 1 and 24, respectively, is incorporated. Bush does not specifically disclose *wherein the signal leakage condition is determined to exist if the measured signal level of the carrier frequency is greater than the equivalent of 20 microvolts per meter*. However, Ostteen discloses that the monitoring program reads, extracts and stores in text files signal strength information pertaining to 4 different ranges, one of which is 20-49 microvolts/m (6:5-16). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen in Bush because this feature would allow Bush to save the measured signal levels that are greater than 20 microvolts/m. Bush does not specifically disclose that the measurements are *measured at three meters*. However, Ostteen allows a user to enter predefined distances into the RF meter with function keys (8:28-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen to set one function key to the value of “3 meters” so that measurements of signal leakage could be made at three meters.

#### Claims 20 and 34

The rejection of base claims 1 and 24, respectively, is incorporated. Bush does not specifically disclose *wherein the signal leakage condition is determined to exist if the measured signal level of the carrier frequency is greater than the equivalent of between 5 to 20 microvolts per meter measured at three meters*. However, Ostteen discloses that the monitoring program reads, extracts and stores in text files signal strength information pertaining to 4 different ranges, one of which is 0-19 microvolts/m (6:5-16). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen in Bush because this feature would allow Bush to save the measured signal levels that are between 5 to 20 microvolts/m. Bush does not specifically disclose that the measurements are *measured at three meters*. However,

Ostteen allows a user to enter predefined distances into the RF meter with function keys (8:28-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen to set one function key to the value of "3 meters" so that measurements of signal leakage could be made at three meters.

### **Claim 22**

Since Claim 22 is an independent claim that recites all the limitations of Claim 1, the rejection set forth in Claim 1 is deemed applicable to Claim 22. Bush does not specifically disclose:

*saving the measured signal level of the carrier frequency in memory ;*

*saving the measured signal level of the off-tuned carrier frequency in memory.*

However, Ostteen discloses that the data in RAM are saved every two minutes for the purpose of providing data backup to the computer system such that if power is lost, no more than two minutes of data will be lost (see at least 7:33-60). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature in Bush for the same purpose.

### **Claim 23**

The rejection of base claim 22 is incorporated. Bush further discloses *wherein the signal leakage condition is determined to exist if the interference condition is not declared and the measured signal level of the carrier frequency is less than a predetermined leakage amount* (see at least 8:45-60).

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:00 am to 5:30 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR

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only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.  
Should you have questions on access to the Private PAIR system, contact the  
Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

A handwritten signature in black ink, reading "Hoang Anthony Nguyen Ba". The signature is written in a cursive, flowing style.

ANTONY NGUYEN-BA  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100

October 18, 2007